

A Temperature-Compensated FBG Pressure Sensor for Underwater Pipeline Monitoring

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ABSTRACT

This paper presented an aluminium diaphragm-based FBG pressure sensor for pressure measurement of underwater pipeline. The proposed pressure sensor obtained a pressure sensitivity of 2.43 nm/MPa across the range of 0 MPa to 0.3 MPa with good linearity of 99.95 %. Furthermore, this pressure sensor has also equipped with temperature sensing FBG for temperature compensation.

KEYWORDS: Fibre Bragg grating (FBG) , Temperature compensated , Pressure sensor

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